APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,633	03/06/2001	Edward L. Schwartz	74451.P127D9	3348

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EXAMINER
CHEN, WENPENG

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 August 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Drawings

1.   The drawings are objected to because of the following informalities.

-- The labels are in handwritten form and difficult to recognize.

-- In Fig. 3(a), the numerals "320" and "321" shall be replaced with "310" and "311",

respectively.

Correction is required.

2.   Figure 1 should be designated by a legend such as --Prior Art-- because only that

which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected

drawings are required in reply to the Office action to avoid abandonment of the application. The

objection to the drawings will not be held in abeyance.

Specification

3.   The disclosure is objected to because of the following informalities:

-- In page 49, line 8, the word [times] shall be replaced with - tiles -.

Appropriate correction is required.

Claim Objections

4.   Claims 18-19 are objected to because of the following informalities:

-- Claim 18 recites an apparatus defined by the method Claim 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 2-3, 5-6, and 8-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a.   Claims 2, 5, and 8 require (1) storing remaining layers of the each tile in a buffer, (2) outputting additional packets of said each tile from the remaining layers as a second complete tile-part, and (3) wherein selection of packets of the plurality of packets for inclusion in the first complete tile-part is based on total bandwidth for first and second passes.

Checking the specification, the Examiner cannot find support for the limitation of " wherein selection of packets of the plurality of packets for inclusion in the first complete tile-part is based on total bandwidth for first and second passes." The selection may be based on a total target bit rate, but not on the total bandwidth for first and second passes, especially the bandwidth of second pass or the combination of bandwidth of the first and second passes.

b.   Claims 3, 6, and 9 require (1) storing remaining layers of the each tile in a buffer, (2) outputting additional packets of said each tile from the remaining layers as a second complete tile-part, and (3) wherein selection of packets of the plurality of packets for inclusion in the first complete tile-part is *based on size of the buffer*.

The selection may be based on the size of a buffer that stores the outputted packets associated with the first complete tile-part. However, the specification does not teach the selection is based on *size of the buffer that stores remaining layers of the each tile*. Please indicate portions of the specification that supports the recited limitation.

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8.   Claims 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As explained above, it is not clear that Claims 18-19 recite methods or apparatuses.

Claim Interpretation

9.   For examining Claims 18-19 over the prior art, the Examiner make the following interpretation:

-- Replace "Claim 10" in line 1, Claim 18 to "Claim 15".

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11.   Claims 1, 4, 7, 10-17 and 20-21 and the interpreted Claims 18-19 are rejected

under 35 U.S.C. 102(e) as being anticipated by Joshi et al. (US patent 6,668,090.)

a.   For Claims 1, 4, and 7

Joshi teaches an apparatus comprising:

-- means for coding of each tile of an input codestream; (Figs. 1-2 and 9; column 5, lines

12-55)

-- means for outputting a plurality of packets of said each tile as part of an output

codestream as a first complete tile-part; (column 1, line 34 to column 2, line 3; column 2, lines

12-55; column 11, lines 23-57; The system generates a bitstream as taught by JPEG2000 image

compression standard described in ISO/IEC JTC1/SC29 WG1 N1646, hereafter referred as

N1646. In N1646, the data can be stored (section 6 of JPEG2000 N1646.) As shown in Fig. A-2

of N1646, tile part 1 is formed and outputted as bitstream.)

-- means for storing remaining layers of said each tile in a buffer; (All of the image data is stored in a memory as cited above. The memory is a buffer. Data are stored there and read out to form different tile parts.)

-- means for outputting additional packets of said each tile from the remaining layers as a second complete tile-part. (As shown in Fig. A-2 of N1646, tile part 2 for the remaining layers is formed and outputted as a continuous part of the bitstream.)

The above-cited passages also teach the corresponding method of Claim 1.

Joshi further teaches an article of manufacture comprising at least one recordable media storing executable instructions that can be executed by the computer shown in column 4, lines 33-67 to carry out the method. Therefore, Joshi also teaches Claim 7.

b.   For Claims 10-17 and 20-21 and the interpreted Claims 18-19

Joshi teaches an apparatus comprising:

-- means for compressing a bitstream to create an original compressed codestream; (Figs. 1-2 and 9)

-- means for performing rate control on the original compressed codestream to created a new compressed codestream in response to a request by selecting a number of layers to remain in the codestream, including a parser to use a packet structure containing a selection flag and to set a selection flag for each packet of the original codestream to a predetermined value to indicate whether said each packet is to be included in the new compressed codestream to control whether individual layers are included in the new compressed codestream; (Fig. 9; column 5, lines 42-55; column 11, lines 11-57 and 58-62; column 1, line 34 to column 2, line 3; column 2, lines 12-55;

column 11, lines 23-57; The system generates a bitstream as taught by JPEG2000 image

compression standard described in ISO/IEC JTC1/SC29 WG1 N1646. In N1646, the data is

stored and processed (section 6 of JPEG2000 N1646.) Joshi uses JPEG2000 compression as

shown in column 4, lines 1-68. A JPEG2000 uses packet structure. Fig. 9 describes a rate-control

method by reducing bit-budget from a maximum value to a target value with selecting truncation

points. The truncation points are selection flags to indicate what is included in the new

compressed codestream. The passage in column 11, lines 58-62 teaches that a rate-control

method can also be achieved by increasing bit-budget from a minimum value to a target value

with selecting truncation points. It is the latter case that teaches Claim 15.)

-- means for computing a total number of bytes for the new compressed codestream based

on a desired rate; (block 912 of Fig. 9; column 11, lines 58-62)

-- means for adding the total number of bytes associated with at least one layer, starting

with the highest level layer and adding a new layer until the total number of bytes associated

with the one or more layers whose bytes have been added is equal to or greater than the number

of bytes desired or bytes for all layers have been added; (block 914 of Fig. 9; column 11, lines

58-62)

-- means for subtracting bytes associated with a last added layer when the total number of

bytes associated with the one or more layers whose bytes have been added is greater than the

number of bytes desired; (block 914 of Fig. 9; column 11, lines 58-62; The last added layer that

makes the total number of bytes larger than the target bytes is discarded (subtracted.))

-- means for setting selection flags of packets associated with layers whose bytes are included in the total number of bytes; (block 915 of Fig. 9; column 11, lines 58-62; The truncation point are updated.)

-- mean for writing the new codestream based on whether selection flags of packets for the original compressed codestream are set; (column 1, line 34 to column 2, line 3; column 2, lines 12-55; column 11, lines 23-57; The system generates a bitstream as taught by JPEG2000 image compression standard described in ISO/IEC JTC1/SC29 WG1 N1646. In N1646, the data can be stored (section 6 of JPEG2000 N1646.) In column 11, Joshi teaches generating truncated bitstream 911 that is generated based on the selection flags. As taught in section 6 of JPEG2000 N1646, the resultant bitstream is stored. Therefore, the truncated bitstream is written into a memory.)

-- means for reading packets in sequential order from the compressed codestream based on order information indicated in a marker; (column 11, lines 11-67; The marker is that shown in the visual quality table.)

-- wherein the order information comprises progression order information and the marker comprises a COD marker. (column 11, lines 11-67; Section A. 61 of JPEG2000 N1646 teaches that the JPEG2000 bit stream comprises a COD marker.)

The above-cited passages also teach the corresponding methods of Claims 10-14.

Joshi further teaches an article of manufacture comprising at least one recordable media storing executable instructions that can be executed by the computer shown in column 4, lines 33-67 to carry out the method. Therefore, Joshi also teaches Claims 20-21.

Examiner's Statement

12.   No prior art teaches the features recited in Claims 2-3, 5-6, and 8-9.

Conclusion

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

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Wenpeng Chen
Primary Examiner
Art Unit 2624

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February 18, 2004